

200000-2222001

FIG. 1

Type	Origin	PB1: Positions												
		52	54	105	175	208	298	364	383	384	396	431	464	
H7N7	Bratislava 82 chicken	K	K	N	D	K	L	L	E	P	I	Y	D	
H7N7	Rostock34 chicken	K	K	N	D	K	L	L	E	S	L	Y	D	
H1N1	WSN33 human	R	R	I	N	R	I	I	D	S	L	H	N	
H1N1	Wisconsin88 human	R	K	N	E	K	L	L	D	S	L	Y	D	
H2N2	Singapore57 human	K	K	N	D	K	L	L	E	S	L	Y	D	
H2N2	Ann Arbor60 human	K	K	N	D	K	L	L	E	S	L	Y	D	
H3N2	Hongkong68 human	K	K	N	D	K	L	L	E	S	L	Y	D	
H3N2	Shiga97 human	K	K	N	D	K	L	L	E	S	L	Y	D	
H3N2	Hongkong82 swine	K	K	N	D	K	L	L	E	S	L	Y	D	
H3N2	Katakyushu93 human	R	K	N	D	K	L	L	E	S	L	Y	D	
H3N8	Tennessee86 equine	K	K	N	N	K	L	L	E	S	L	Y	D	
H4N2	Minnesota80 turkey	K	K	N	D	K	L	L	E	S	L	Y	D	
H4N6	Ontario99 swine	K	K	N	D	K	L	L	E	S	L	Y	D	
H5N1	Hongkong97 human	K	R	N	D	K	L	L	E	S	L	Y	D	
H6N1	Taiwan99 chicken	K	K	N	D	K	L	L	E	S	L	Y	D	
H7N7	London73 equine	K	K	N	D	K	L	L	E	S	L	Y	D	
H9N2	Pakistan99 chicken	K	K	N	D	K	L	L	E	S	L	Y	D	

FIG 1 (continued)

		PB1: Positions										
Type	Origin	473	576	584	628	633	636	644	645	654	741	
H7N7	Bratislava 82 chicken	V	L	R	M	S	E	A	V	S	A	
H7N7	Rostock34 chicken	V	L	R	L	S	E	V	V	S	A	
H1N1	WSN33 human	L	I	H	L	N	D	V	I	N	I	
H1N1	Wisconsin88 human	L	I	R	L	S	E	V	V	T	A	
H2N2	Singapore57 human	V	L	R	L	S	E	V	V	S	A	
H2N2	Ann Arbor60 human	V	L	R	L	S	E	V	V	S	A	
H3N2	Honkong68 human	V	L	R	L	S	E	V	V	S	A	
H3N2	Shiga97 human	V	L	Q	L	S	E	V	V	S	S	
H3N2	Hongkong82 swine	V	L	Q	L	S	E	V	V	S	S	
H3N2	Katakayushu93 human	V	L	Q	L	S	E	V	V	S	S	
H3N8	Tennessee86 equine	V	L	R	L	S	E	V	V	S	A	
H4N2	Minnesota80 turkey	V	L	R	L	S	E	V	V	N	A	
H4N6	Ontario99 swine	V	L	R	L	S	E	V	V	S	A	
H5N1	Hongkong97 human	V	L	R	L	S	E	V	V	S	A	
H6N1	Taiwan99 chicken	V	L	R	L	S	E	V	V	S	A	
H7N7	London73 equine	V	L	R	L	S	E	V	V	S	A	
H9N2	Pakistan99 chicken	V	L	R	L	S	E	V	V	S	A	

Fig.2

Fig.2 plasmid	constitution						other segments	orig.titer	CAT assay		
	v1 / c1	x3'	c2	S L P I	H x5'	L V MA			293T	MDCK	
map PB1	<u>v1 / c1</u>			<u>S L</u> <u>P</u>		<u>H</u> <u>L V</u> <u>x5'</u> <u>MA</u>					
WSN-PB1	WSN						WSN	7x10 ⁸ /ml	11	2	
pHL3102	WSN		FPV				WSN	1x10 ⁸ /ml	22	38	
pHL3103	FPV		WSN				WSN	2x10 ⁷ /ml	10	13	
pHL3130	WSN	FPV		WSN				WSN	1x10 ⁵ /ml	14	25
pHL3131	WSN	FPV	WSN				WSN	2x10 ⁶ /ml	18	25	
pHL3115	FPV						WSN	3x10 ⁵ /ml	17	28	
pHL1844	FPV						FPV	3x10 ⁹ /ml	48	100	

Fig.3

plasmid	constitution						other segments	orig.titer	CAT assay	
	v1 / c1	x3'	c2	S L P	H	L V			293T	MDCK
map PB1					x5'	MA				
WSN-PB1				WSN			WSN	7×10^8 /ml	11	2
pHL3204					FPV		WSN	2×10^8 /ml	12	3
pHL3203						FPV	WSN	1×10^8 /ml	24	42
pHL3246			FPV				WSN	3×10^8 /ml	10	3
pHL3247			FPV				WSN	4×10^5 /ml	20	29
pHL3258							WSN	1×10^7 /ml	28	50
pHL3259					FPV		WSN	3×10^7 /ml	32	61
pHL3268						FPV	WSN	3×10^7 /ml	39	71
pHL1844				FPV			FPV	3×10^9 /ml	48	100

Fig. 4

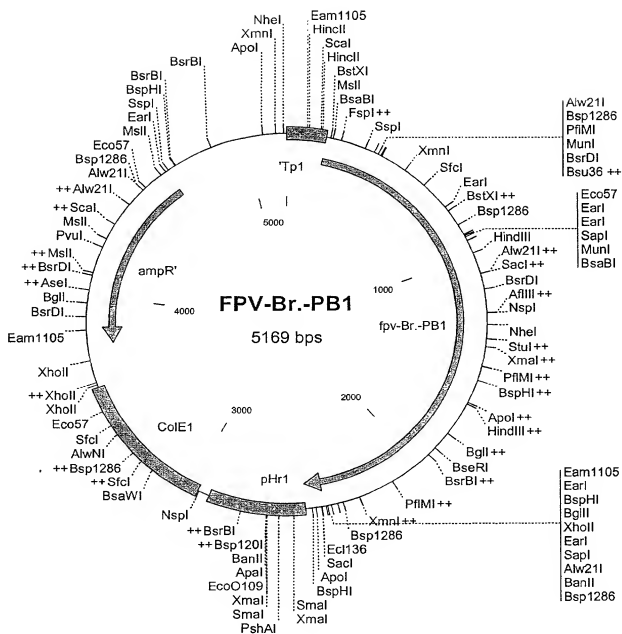


Fig. 5

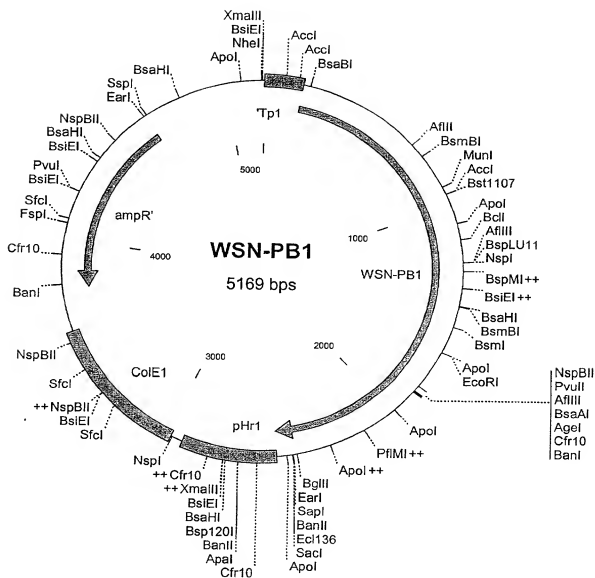
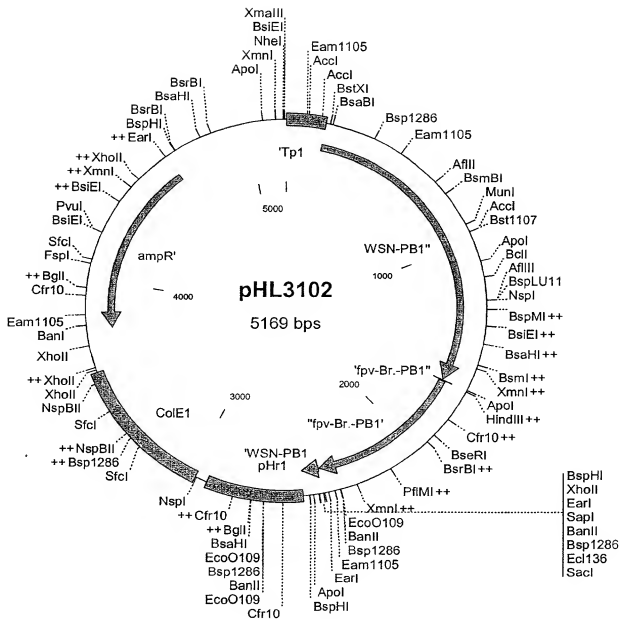


Fig. 6



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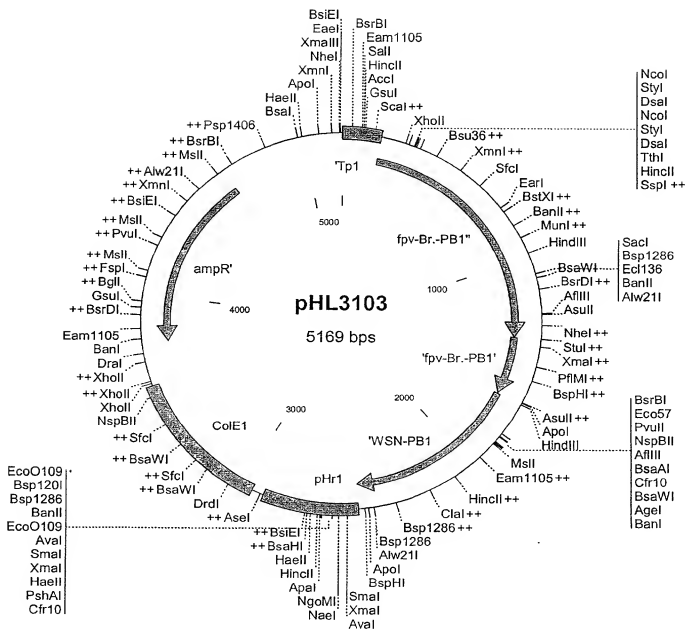


Fig. 8

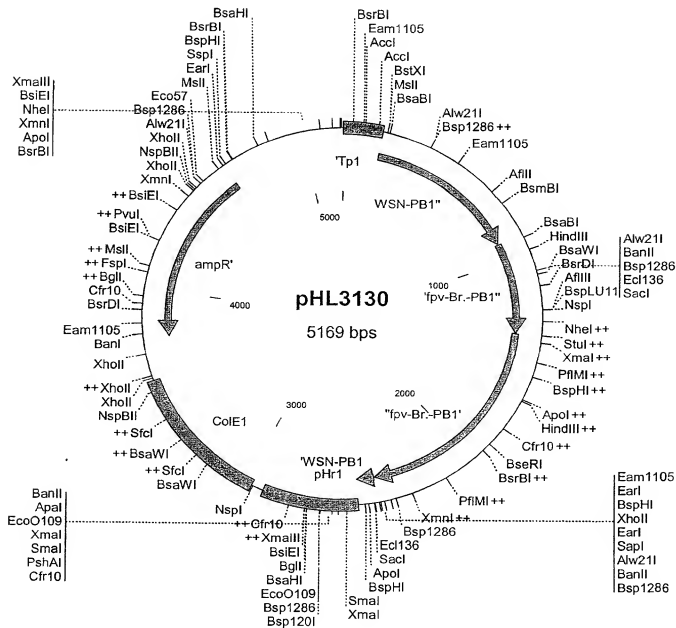


Fig. 9

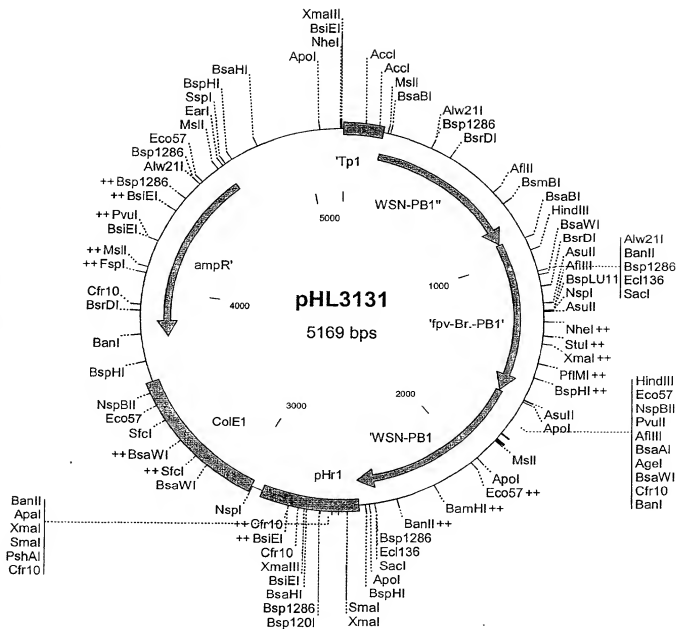


Fig. 10

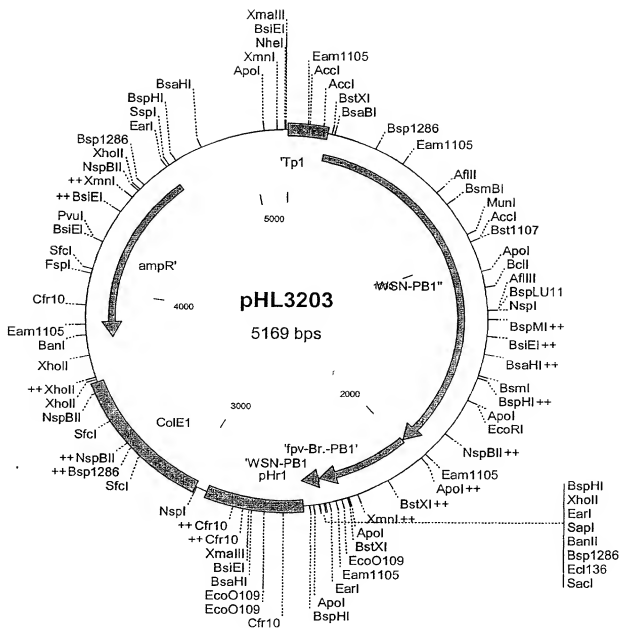
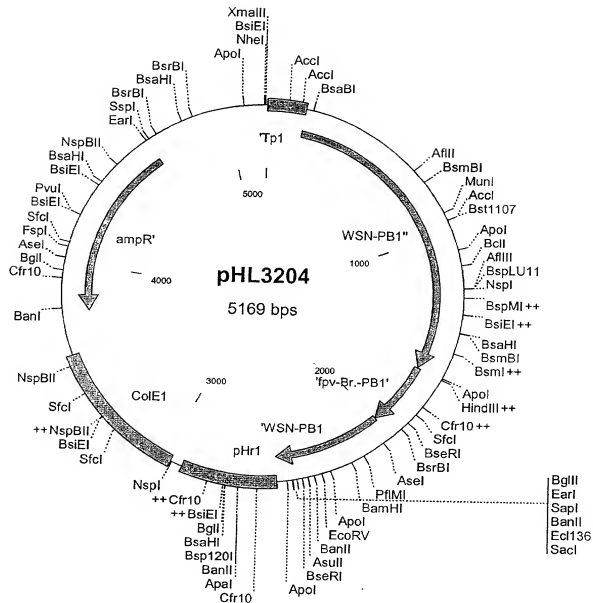


Fig. 11



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TODAY

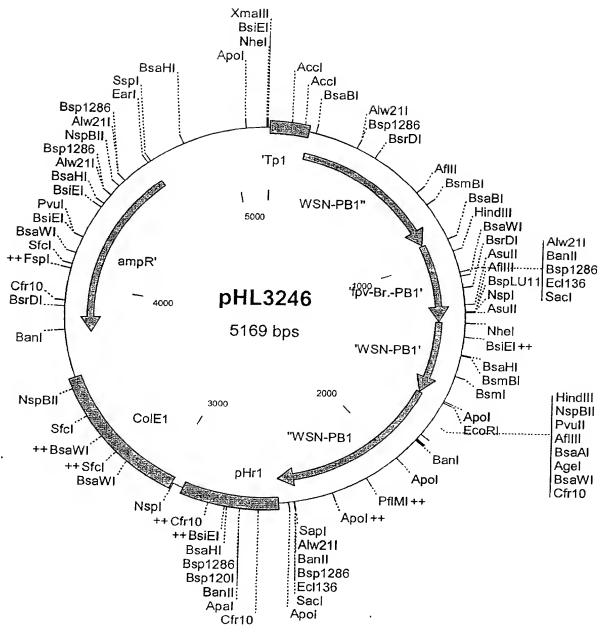
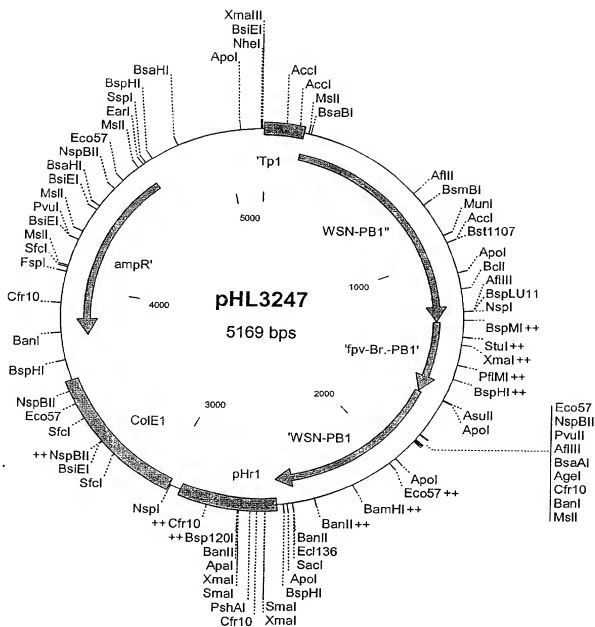
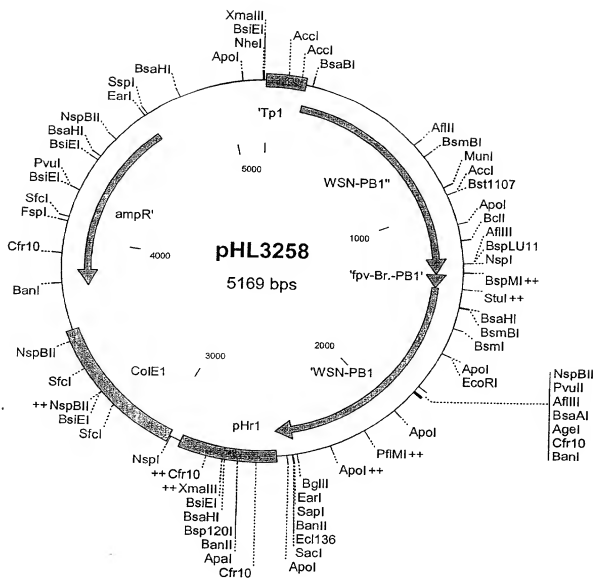


Fig. 13



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Fig. 14



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Fig. 15

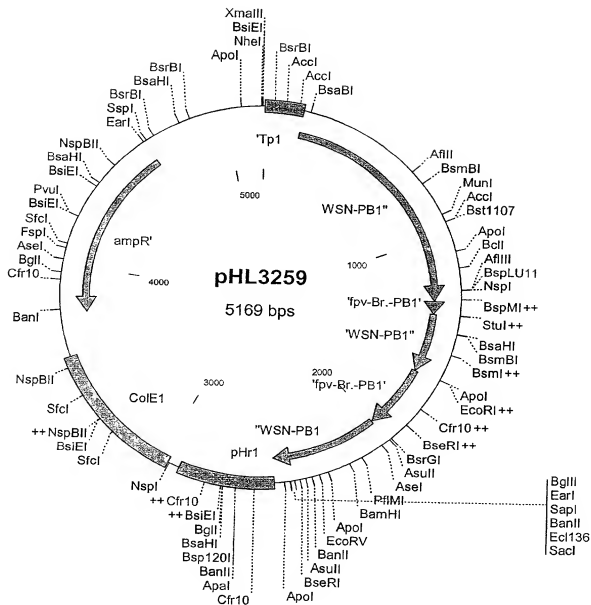


Fig. 16

